DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017805
Date Inspected: 24-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspector: ZPMC: Mr. Xu Tao

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 15928 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair to make repairs to OBG segment 13CE plate side plate to bottom plate weld SEG3011-011 in accordance with weld repair document B-WR15928. The reason for this repair was due to ultrasonic rejections as listed on UT report #B787-UT-16126. This QA Inspector observed a welding current of approximately 160 amps that Mr. Wang Li appeared to be certified to make this weld. This QA Inspector observed the base material appeared to have been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

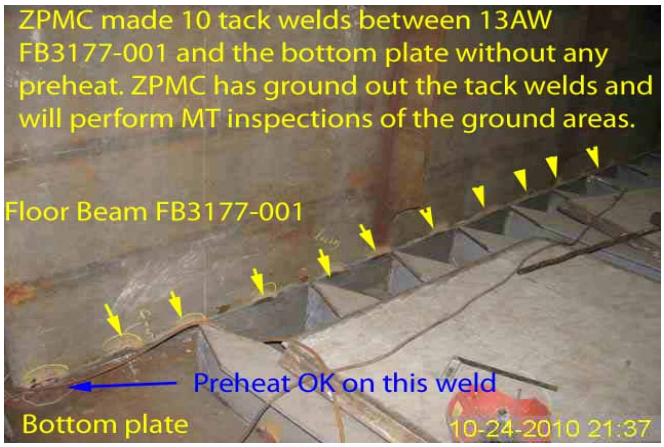
This QA Inspector observed ZPMC welder Mr. Zhou Zhenyuan stencil 202805 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to tack weld segment 13CE floor beams FB3222A and FB3229A. This QA Inspector observed Mr. Zhou Zhenyuan appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Fuli, stencil 045136 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to tack weld segment 13AE floor beam FB3181-001 to the bottom plate. This QA Inspector measured a welding current of approximately 175 amps and Mr. Rao Wei appeared to be certified to make this weld. This QA Inspector observed that ZPMC had preheated the base material with a torch prior to welding and the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Rao Wei stencil 049972 used shielded metal arc welding procedure specification WPS-B-P-2212-FCM-1 to tack weld segment 13AE floor beam FB3177-001 to the bottom plate. This QA Inspector measured a welding current of approximately 160 amps and Mr. Rao Wei appeared to be certified to make this weld. Following completion of the tack weld this QA Inspector observed that ZPMC had not preheated the base material prior to welding. The WPS requires a minimum base material preheat of 140°C and the base material was at an ambient temperature. This QA Inspector informed ZPMC CWI Mr. Xu Tao that the base material had not been preheated and Mr. Xu Tao informed this QA Inspector that he will have all ten of the tack welds that Mr. Rao Wei had recently completed will be removed and the ground areas will be magnetic particle (MT) inspected prior to new tack welds being installed at these locations. See the photographs below for additional information. Items observed on this date do not fully appear to comply with applicable contract documents.

Blast Shop 2

ZPMC requested Caltrans personnel to perform visual inspections of South Tower Lift 3 interior surfaces between 99 meters elevation to 114 meters at 19:10 hours following the initial pre-blast cleaning of the steel surfaces. This QA Inspector along with other QA Inspectors performed random visual inspections of these areas. This QA Inspector visually observed approximately 30 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections, approximately five areas that require magnetic particle inspections and no areas that require weld repairs. ZPMC had several workers use grinders to remove the areas identified above and Caltrans QA Inspector Mr. Baskar Govindarajan performed followup inspections of these areas. Items observed on this date appeared to generally comply with applicable contract documents.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer